



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,341	03/04/2002	Cary Lee Bates	ROC920010348US1	3890
46797	7590	04/15/2008		
IBM CORPORATION, INTELLECTUAL PROPERTY LAW DEPT 917, BLDG. 006-1 3605 HIGHWAY 52 NORTH ROCHESTER, MN 55901-7829				
EXAMINER				
FRANCIS, MARK P				
ART UNIT		PAPER NUMBER		
2193				
MAIL DATE		DELIVERY MODE		
04/15/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/090,341

**Applicant(s)**

BATES ET AL.

**Examiner**

MARK P. FRANCIS

**Art Unit**

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-6,8-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is responsive to the communication filed January 04, 2008.
2. Applicant's arguments, see Remarks, filed January 04, 2008, with respect to the rejection(s) of claim(s) 1-2,4-6,8-12, and 14-20 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Joshi (U.S. Pat 6,839,894).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4-6,9-12, and 15-19 rejected under 35 U.S.C. 102(e) as being anticipated by Joshi. (U.S. Pat 6,839,894)

Regarding claims 1 and 9,

Joshi discloses a method of debugging executable code configured to access associated data in a data repository,(Col 7:35-45, "...the software program is a

database system,...", Col 7:55-67, "...may call for accessing data, such as a persistent structure...") comprising:

Initiating a debugging session for the executable code, (Col 7:20-30, "...The programmer of a particular debug and testing session....") and during the debugging session; (Col 7:20-30, "...The programmer of a particular debug and testing session....")

Monitoring step-by-step execution of the executable code; (Col 7:15-25, "...has a private view of the original software program, which is being debugged...")

determining whether the monitored executable code has accessed the associated data in the data repository if so, (Col 7:55-67, "...The execution of a secondary program may call for accessing data, such as a persistent structure...") determining whether to display the associated data on the basis of whether the associated data is restricted data; (Col 8:1-20, "...Debug and testing operations cannot write to read-only data...") wherein determining whether to display the associated data comprises referencing predefined access restriction rules defining at least one rule preventing at least a portion of the associated data from being displayed to unauthorized users; (Col 6:39-50, '...each user sees...executed by that user...the preserved portions of the software program that have not been modified...', Col 6:60-67, "...User 1 is unable to see the changes in 106c...")

and

upon determining not to display the associated data on the basis of the referenced predefined access restriction rules, (Col 8:1-20, "...Debug and testing operations cannot

write to read-only data...") outputting masking characters on an output screen indicative of the associated data without revealing a value of the associated data, (Col 8:1-20, "...the debug and testing system preferably produces a logical error message...")whereby selected data from the data repository is concealed from a user debugging the executable code. (Col 8:1-20, "...the debug and testing system preferably produces a logical error message...")

Regarding claim 16,

Joshi discloses a computer-readable medium(Col 9:15-27, "...computer-readable medium...") containing a debug program(Col 7:20-30, "...The programmer of a particular debug and testing session....") which, when executed, performs an operation of debugging code configured to access associated data in a repository, (Col 7:55-67, "...The execution of a secondary program may call for accessing data, such as a persistent structure...") the debug program comprising:

A debugger user interface; (Col 8:55-65, "...to a display...for displaying information to a computer user...")

A debug engine(Col 6:15-25, "...a page map is used to keep track of all the pages...") configured to selectively pass data to the debugger user interface according to predefined access restriction rules(Col 8:1-20, "...Debug and testing operations cannot write to read-only data...") defining at least one rule prohibiting at least a portion of the associated data from being displayed to a user operating the debug program, (Col 8:1-20, "...the debug and testing system preferably produces a logical error message...",Col

6:39-50, "...each user sees...executed by that user...the preserved portions of the software program that have not been modified...", Col 6:60-67, "...User 1 is unable to see the changes in 106c..."

Dependent claims

Regarding claims 2 and 10, the rejection of claims 1 and 9 are incorporated respectively and further Joshi discloses that determining whether to display the associated data comprises determining whether the associated data can be provided to a debugger user interface. (Col 8:1-20, "...the debug and testing system preferably produces a logical error message...", Col 6:39-50, "...each user sees...executed by that user...the preserved portions of the software program that have not been modified...", Col 6:60-67, "...User 1 is unable to see the changes in 106c..."

Regarding claims 4 and 12, the rejection of claims 1 and 9 are incorporated respectively and further Joshi discloses that determining whether the associated data can be displayed comprises referencing a restricted data table created in response to reading the associated data from the repository and according to the predefined access restriction rules. (Col 6:40-50, "...The modified copies may be arranged in a view private fashion..."

Regarding claim 5, the rejection of claim 1 is incorporated and further Joshi discloses

that determining whether to display the associated data is performed by a debugging program. (Col 8:1-20, "...the debug and testing system preferably produces a logical error message...", Col 6:39-50, "each user sees...executed by that user...the preserved portions of the software program that have not been modified...", Col 6:60-67, "...User 1 is unable to see the changes in 106c...", Col 7:20-30, "...The programmer of a particular debug and testing session....")

Regarding claim 6, the rejection of claim 1 is incorporated and further Joshi discloses determining whether to display the associated data is performed by a debugging program implementing the predefined access restriction rules. (Col 8:1-20, "...the debug and testing system preferably produces a logical error message...", Col 6:39-50, "...each user sees...executed by that user...the preserved portions of the software program that have not been modified...", Col 6:60-67, "...User 1 is unable to see the changes in 106c...", Col 7:20-30, "...The programmer of a particular debug and testing session....")

Regarding claims 11 and 17, the rejection of claims 9 and 16 are incorporated respectively and further Joshi discloses The debug engine is configured to: Determine that the associated data cannot be displayed during the debugging session; (Col 8:1-20, "...Debug and testing operations cannot write to read-only data...") and conceal the display of the associated data by displaying text characters on an output screen indicative of the associated data without revealing a value of the associated data. (Col 8:1-20, "...the debug and testing system preferably produces a logical error

message...”, Col 6:39-50, “...each user sees...executed by that user...the preserved portions of the software program that have not been modified...”, Col 6:60-67, “...User 1 is unable to see the changes in 106c...”)

Regarding claim 15, the rejection of claim 9 is incorporated and further Joshi discloses The executable code accesses the associated data comprising a record and wherein determining whether the associated data can be displayed ,(Col 7:55-67, “...The execution of a secondary program may call for accessing data, such as a persistent structure...”)

comprises:  
Referencing the predefined access restriction rules defining at least one rule preventing at least one field value from being displayed; (Col 8:1-20, “...Debug and testing operations cannot write to read-only data...”)

and  
Determining whether the record contains the at least one field value. (Col 6:60-67, “...User 1 is unable to see the changes in 106c...”, Col 7:20-30, “...The programmer of a particular debug and testing session....”)

Regarding claim 18, the rejection of claim 16 is incorporated and further Joshi discloses that the debug engine is configured to selectively pass data to the debugger user interface by referencing a restricted data table created in response to reading the associated data from the repository and according to the predefined access restriction rules. (Col 8:1-20, “...Debug and testing operations cannot write to read-only data...”)



Art Unit: 2193

Regarding claim 19, the rejection of claim 16 is incorporated and further Joshi discloses The at least one rule defines a value and an associated value, wherein if the associated value has been displayed the debug engine will not provide the value to the debugger user interface for display. (Col 8:1-20, "...Debug and testing operations cannot write to read-only data...")

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8,14, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joshi in view of Kolawa. (U.S. Pat 6,085029)

Regarding claims 8 and 14.

Joshi does not disclose determining whether to display the associated data comprises referencing a parse expression defining a data format and an output expression defining a restricted portion of the parse expression.

Kolawa discloses determining whether to display the associated data comprises referencing a parse expression(Col 5:46-50, "a parsing...") defining a data format and

Art Unit: 2193

an output expression defining a restricted portion of the parse expression(Col 7:28-35, "...form of debug output...") in an analogous system for the purpose to generate code for the target program which not only functions as was originally intended, but also contains calls to instrumentation procedures which provide automatic error detection of dynamic program errors as well as an ability to automatically generate test cases. (Kolawa: Col 7: 36-41)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to reference a parse expression for determining data to be displayed during a debugging session.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to develop a method of automatically instrumenting a computer program for dynamic debugging as an integral part of the program development cycle and without introducing an extra stage in the program development cycle. (Col 2: 27-33, "...an extra stage...")

#### Regarding claim 20

Joshi does not disclose that the at least one rule defines a parse expression defining a data format and an output expression defining a restricted portion of the parse expression, whereby all values having restricted portion will not be provided to the debugger user interface for display.

Kolawa discloses that the at least one rule defines a parse expression defining a data format and an output expression(Col 7:28-35, "...form of debug output...") defining a restricted portion of the parse expression(Col 15:49, "parse tree..."), whereby all values having restricted portion will not be provided to the debugger user interface for display(Col 16:53-61, "...interface is inserted...") in an analogous debugging program for the purpose to generate code for the target program which not only functions as was originally intended, but also contains calls to instrumentation procedures which provide automatic error detection of dynamic program errors as well as an ability to automatically generate test cases. (Kolawa: Col 7: 36-41)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to reference a parse expression, whereby all values that contain restricted portion will not be provided for determining data to be displayed during a debugging session.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to develop a method of automatically instrumenting a computer program for dynamic debugging as an integral part of the program development cycle and without introducing an extra stage in the program development cycle. (Col 2: 27-33, "...an extra stage...")

***Response to Arguments***

7. Applicant's arguments filed on January 04, 2008 have been fully considered but are moot in view of the new grounds of rejection.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK P. FRANCIS whose telephone number is (571)272-7956. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571)272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2193

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark P. Francis

Patent Examiner

Art Unit 2193

/Lewis A. Bullock, Jr./  
Supervisory Patent Examiner, Art Unit 2193